



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,691	04/18/2005	Steve King	E1844-006	9214
8933	7590	06/19/2006	EXAMINER	
DUANE MORRIS, LLP IP DEPARTMENT 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103-4196			KAPLAN, HAL IRA	
			ART UNIT	PAPER NUMBER
			2836	

DATE MAILED: 06/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary

Application No.

10/522,691

Applicant(s)

KING, STEVE

Examiner

Hal I. Kaplan

Art Unit

2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2005 and 06 March 2006.
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 and 38-54 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☒ Claim(s) 40-42 is/are allowed.
 6) ☒ Claim(s) 1-3, 10-15, 17-23, 25, 28, 38 and 52-54 is/are rejected.
 7) ☒ Claim(s) 4-9, 16, 24, 26, 27, 39 and 43-51 is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 28 January 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 4/18/05.
 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) ☐ Notice of Informal Patent Application (PTO-152)
 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file. Receipt is acknowledged of Applicant's response to the Notice of Non-Compliant Amendment dated March 6, 2006. The claims now comply with 37 CFR 1.121(c)(2).

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The disclosure is objected to because of the following informalities: page 6, line 27 through page 10, line 3 and page 13, lines 17, 19, 22, and 29 contain the words "means" and "said". As the purpose of the specification is to enable one of ordinary skill in the art to make and/or use the invention, and one of ordinary skill in the art would not understand the form and legal phraseology often used in patent claims, such as "means" and "said," they should be removed.

Appropriate correction is required.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, multiple loads simultaneously connected to the control means (Figures 1, 6a, 9a, and 10 show only one load) via a switching means enabling one or a sub-set of the loads to be connected to the control means based upon the voltage across the control means, as claimed in claims 4-7 and 43 (the load switching means is not specifically claimed, but in order for the device to have the claimed functionality, means allowing each load and/or sub-set of loads to be selectively connected and disconnected are implicit), must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Claim Objections

5. Claim 16 is objected to because of the following informalities: Claim 16 line 3, the phrase "the mains supply" lacks proper antecedent basis. Appropriate correction is required.

6. Claims 21 and 51 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claims 21 and 51 recite the limitation "wherein the array of loads have power requirements ranging up to and including" 6000 VA or 2000 VA. The loads constitute the articles worked upon by the apparatus, and not part of the invention itself, and it has been held that recitation of the material or article worked upon by a claimed apparatus

Art Unit: 2836

does not limit the apparatus claim. *In re Young*, 75 F.2d 996, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)). See MPEP §2115.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 54 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claim 54 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-3, 10-12, and 52 are rejected under 35 U.S.C. 102(e) as being anticipated by the US patent of Silverman (6,731,022).

As to claims 1 and 52, Silverman, drawn to a digital battery, discloses a power

Art Unit: 2836

supply device read on the claimed device, including: at least one power means (semiconductor switch array) for providing electrical energy for the load (see column 7, line 59 through column 8, line 11 and Figures 3, 4, and 6); and control means (CPU), connected to the power means and the load, for controlling the device (see column 6, lines 46-49); wherein the power means incorporates a plurality of electrical potential storage units (see column 5, lines 23-26 and 34-38), each storage unit providing substantially the same electrical potential energy as determined by a potential difference, or a voltage, across the electrical potential energy storage unit; and the control means is arranged to connect the electrical potential energy storage units according to the power required by the load (see column 7, line 59 through column 8, line 11), the same power means being employable for each one of the array of loads.

As to claim 2, the electrical potential energy storage units within the power means can be connected in parallel by the control means, making the voltage across the or each power means substantially the same as the voltage across the electrical potential energy storage units incorporated within the power means (see column 8, lines 20-26).

As to claim 3, the electrical potential energy storage units within the power means are connected in series by the control means, making the voltage across the power means substantially equal to the sum of the voltages across the electrical potential energy storage units incorporated within the power means (see column 8, lines 11-18).

As to claim 10, the power means (switch array) weighs less than 25 kg.

Art Unit: 2836

As to claim 11, the control means (CPU) weighs less than 25 kg.

As to claim 12, the electrical potential energy storage units are battery packs (see column 5, lines 34-38).

12. Claims 1, 2, 12, 13, 15, and 17-19 are rejected under 35 U.S.C. 102(e) as being anticipated by the US patent of Blair et al. (6,700,351).

As to claim 1, Blair, drawn to a modular uninterruptible power supply battery management, discloses an uninterruptible power supply device for supplying electrical energy to a load, and for continuing to supply electrical energy to the load for a limited period of time in the event of failure of the load's main power supply, the uninterruptible power supply device including: at least one power means (battery modules 5) for providing electrical energy for the load (8) (see column 3, lines 14-15); and control means (2), connected to the power means (battery modules 5) and the load (8), for controlling the device (see column 3, lines 18-19); wherein the power means (battery modules 5) incorporates a plurality of electrical potential storage units (5) (see column 2, lines 54-57 and 60-61 and column 8, lines 14-15), each storage unit (5) providing substantially the same electrical potential energy as determined by a potential difference, or a voltage, across the electrical potential energy storage unit (5) (see column 8, lines 14-15); and the control means (2) is arranged to connect the electrical potential energy storage units (5) according to the power required by the load (see column 3, lines 53-54).

As to claim 2, the electrical potential energy storage units (5) within each power means (battery modules 5) are connected in parallel by the control means, making the

Art Unit: 2836

voltage across the power means (battery modules 5) substantially the same as the voltage across the electrical potential energy storage units (5) incorporated within the power means (battery modules 5) (see Figure 3).

As to claim 12, the electrical potential energy storage units (5) are battery packs (see column 2, line 31).

As to claim 13, each battery pack is comprised of four 12 V batteries which are connected in series (see column 8, lines 14-15).

As to claim 15, the control means (2) is arranged to connect a further power supply (7) in the event of failure of the load's main power supply (4), such that the voltage across each potential energy storage unit (111) remains substantially unchanged during normal operation of the uninterruptible power supply device (see column 2, lines 50-54).

As to claim 17, the control means (2) is provided with, and controls, an internal bypass switch (10) which, when closed, causes the electrical energy as supplied by the load's main power supply to be provided directly to the load (see column 3, lines 44-48).

As to claim 18, the internal bypass switch is also manually operable (11) by an operator of the uninterruptible power supply device (see column 3, lines 48-50).

As to claim 19, the uninterruptible power supply device is connectable to a bypass means (10), the bypass means (10) being arranged to isolate the uninterruptible power supply device from the load after the internal bypass switch has been closed.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blair in view of the US patent of Batson et al. (6,400,043).

As to claim 14, Blair discloses all of the claimed features, as set forth above, except for at least one connecting cable for respectively connecting the control means to the power means, the connecting cable being connectable to the control means only in a preferred orientation. Batson, drawn to a modular uninterruptible power supply, discloses an uninterruptible power supply device including at least one connecting cable for respectively connecting the control means (124) to the power means (110), the connecting cable being connectable to the control means (124) only in a preferred orientation (plug 128 must be of opposite gender from plug 114) (see column 5, lines 63-66 and column 6, lines 13-17). It would have been obvious to one of ordinary skill in

Art Unit: 2836

the art, at the time of the invention, to use a cable that is connectable only in a preferred orientation, in order to reduce the likelihood of the user causing damage to the device by an improper connection.

16. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blair in view of the article "Uninterruptible Power Supplies for the Rack: Tripp Lite's SU1000RT2U", by Wayne Spivak, VARBusiness, Friday, October 26, 2001.

As to claim 20, Blair discloses all of the claimed features, as set forth above, except for the uninterruptible power supply device being configurable into one of two formats. The article by Spivak discloses an uninterruptible power supply which is configurable into one of two formats, namely a rack-mount format or a standalone format (see paragraph 4, line 1). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to build the device of Blair to be configurable in either rack-mount or standalone format, in order to increase installation flexibility for the user.

17. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blair.

As to claim 21, Blair discloses a load (8), but Blair does not disclose the 6000 VA value. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use a load having a power requirement less than or equal to 6000 VA because it has been held that where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device. *Gardner v. TEC*

Art Unit: 2836

Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984). See MPEP §2144.04(IV)(A).

18. Claims 22, 23, 28, 38, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blair in view of the US patent of Salomon (5,467,106).

As to claims 22, 28, and 53, Blair discloses all of the claimed features, as set forth above, except for a display unit, housed within a receptacle, which is able to adopt a variety of positions within the receptacle. Salomon, drawn to a retractable face-up LCD monitor with off-monitor power supply and back-EMF braking, discloses a display unit (4), housed within a receptacle (2), which is able to adopt a variety of positions within the receptacle (see column 2, lines 53-57; column 4, lines 29-30 and 41-44; column 6, line 63 through column 7, line 2; and Figure 3). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to build the uninterruptible power supply device of Blair with a retractable display, in order to protect the display from damage.

As to claims 23 and 38, the display unit incorporates a liquid crystal display screen (16) (see column 4, lines 29-30 and column 7, lines 2-4).

19. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blair in view of Spivak, and further in view of the US patent of Saye (6,327,152).

As to claim 25, Blair in view of Spivak disclose all of the claimed features, as set forth above, except for the modular units being connectable together by bridging indentations of a first size. Saye, drawn to an interchangeable modular arrangement of computer and accessory devices, discloses modular units (200,300,400) that are

Art Unit: 2836

connectable together by bridging indentations (610,612) of a first size which are formed between the modular units (200,300,400) when positioned together (see column 6, lines 18-19 and 43-49, and Figures 6A-6D and 7A-7C). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to connect modular units of an uninterruptible power supply together by bridging indentations of a first size because the modular units would be quicker and easier to interconnect.

Allowable Subject Matter

20. Claims 40-42 allowed.

21. Claims 4-9, 16, 24, 26, 27, 39, and 43-51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

22. The following is an examiner's statement of reasons for allowance:

Claims 40-42 are allowed because none of the prior art of record discloses modular units connectable together by bridging indentations of a first size which are formed between the modular units when positioned together in either rack-mount or standalone format, in combination with the remaining claimed features.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

23. The following is a statement of reasons for the indication of allowable subject matter:

Claims 4-7 and 43 contain allowable subject matter because none of the prior art of record discloses an uninterruptible power supply device including a control means wherein the voltage across the control means is determined by the voltage across the or each power means, and electrical energy can be provided to a different one of an array of loads by altering the voltage across the control means, in combination with the remaining claimed features.

Claims 8 and 44-50 contain allowable subject matter because none of the prior art of record discloses a control means incorporating a single electrical potential energy storage unit, which the control means connects in parallel to one or more power means, each power means comprising a plurality of electrical potential energy storage units, in combination with the remaining claimed features.

Claim 9 contains allowable subject matter because none of the prior art of record discloses all connections between electrical potential energy storage units, or between power units, being made within the control means, in combination with the remaining claimed features.

Claim 16 contains allowable subject matter because none of the prior art of record discloses the main power supply and the further power supply being separate single-phase electricity supplies from the mains supply, in combination with the remaining claimed features.

Claims 24 and 39 contain allowable subject matter because none of the prior art of record discloses a display unit which takes substantially the shape of a cube and is

Art Unit: 2836

readily removable from, and reinsertable into, the receptacle, in combination with the remaining claimed features.

Claims 26 and 27 contain allowable subject matter because none of the prior art of record discloses two oppositely facing indentations of a second size at the top and bottom of the panel, the indentations of the second size being substantially half the size of the indentations of the first size, in combination with the remaining claimed features.

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US patents to Gottlieb et al. (6,274,950), Ballard et al. (6,774,602), and Gottlieb et al. (6,803,678) disclose similar devices.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal I. Kaplan whose telephone number is 571-272-8587. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2836

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

hik



BRIAN SIRCUS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800